



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,656	10/22/2003	Ahti Muhonen	042933/269768	5860
826	7590	12/13/2007		
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER DAILEY, THOMAS J	
			ART UNIT 2152	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/690,656

Applicant(s)

MUHONEN ET AL.

Examiner

Thomas J. Dailey

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9 and 11-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, and 11-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 8 and 10 were cancelled by the amendment received on October 12, 2007.
2. Claims 1-7, 9, and 11-39 are pending.
3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 12, 2007 has been entered.

Response to Arguments

4. Applicant's arguments filed October 12, 2007 have been fully considered but they are not persuasive.
5. The applicant argues with respect to claim 1 that one of ordinary skill in the art would not have been motivated to combine the teachings of Aubault (US Pub. No. 2005/0086318) and Bereznyi (US Pat. 6,449,695).
6. The examiner disagrees. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the

primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Additionally, logic for the prior art combination of Aubault and Bereznyi is provided in the below rejections of the claims.

7. The applicant further argues with respect to claim 1 that Aubault and Deo (US Pat. 6,449,695) do not teach or suggest a remote apparatus receiving a status of content stored in memory of a terminal, the apparatus being configured to send one or more instructions to the terminal based on that status and one or more parameters associated with the content to thereby control storage of content in memory of the terminal. Specifically, the applicant asserts that Deo does not teach its external computer receiving any information related to memory of its portable information device, much less receiving status information for content stored in the portable information device's memory.
8. The examiner disagrees. Deo's external computer receives information related to memory of its portable information device, more specifically all of it (column 7, lines 54-63).

9. The applicant further argues with respect to claim 14, that nothing suggests that one skilled in the art modify Aubault per Bereznyi to combine application of the two parameters such that piece(s) content are deleted based on those piece(s) content having the lowest relevance from among piece(s) of content exceeding their respective expiration time(s).
10. The examiner disagrees. *KSR International Co. v. Teleflex Inc.* forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the Board decision *Ex Parte Smith*, --, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (citing KSR, 82 USPQ2d at 1396). Additionally, rationale outlining the combination of Aubault and Bereznyi as per claim 14 is provided in that claim's rejection below.
11. The applicant lastly argues with respect to claim 25 that Bereznyi does not teach or suggest multiple expiration times associated with a piece of content.
12. The examiner disagrees. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, rationale outlining the combination of Aubault and Bereznyi as per claim 25, is provided in that claim's rejection below.

Claim Objections

13. Claims 18, 27, and 37, recite, "set a deletion priority value." These claims should recite "set the deletion priority value" as the parent claims explicitly refer to "a deletion priority value."

Claim Rejections - 35 USC § 112

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

16. Claim 14 recites, "send a status of the at least one piece of content such that the at least one piece of content *can be determined* to have an exceeded client expiration time." The phrase, "can be determined" renders the claim indefinite as it makes the determination optional. The claim does not clearly recite that it determines a piece of content that has an exceeded client expiration time.

17. Claim 14 recites, "the at least one piece of content having an exceeded client expiration time." This limitation lacks antecedent basis, see preceding paragraph.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 1-7, 9, and 11-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aubault (US Pub. No. 2005/0056318) and Deo et al. (US Pat. 6,157,982), hereafter "Deo," in further view of Bereznyi et al. (US Pat. 6,449,695), hereafter "Bereznyi."

20. As to claim 12, Aubault discloses an apparatus comprising:

a processor operable within a terminal and configured to:

send, to a network entity located remote from the terminal, a status of at least one piece of content stored in memory of the terminal ([0131], client (terminal) transmits cache information to server (network entity)), each piece of content being associated with parameters including a and a deletion priority value ([0076]-[0077], relevance criterion reads on "a deletion priority value", in that the object with the lowest relevance criterion will be the first to be deleted),

receive one or more instructions based upon the status and the associated parameters to at least partially control storage of the at least one piece of content in memory of the terminal ([0074]-[0077], client (terminal) receives new object and it is stored or discarded (controlled) based upon relevance criterion).

But, Aubault does not explicitly disclose receiving the one or more instructions at the processor from the network entity. Rather, explicit instructions for managing the client's memory is given by the client, and not remotely.

However, Deo discloses receiving one or more instructions at a processor from a remote network entity based upon the status of the content stored in memory to at least partially control storage of the at least one piece of content in memory of the terminal (column 3, lines 16-24, a computer (network entity) remotely issues memory transactions (instructions) to a information device, those instructions being based upon the content of the information device's memory).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Aubault and Deo in order to decrease the processing burden of a terminal that has less

processing power available than a computer it is networked with (Deo, column 2, line 65-column 3, line 4).

Further, Aubault and Deo do not explicitly disclose where the content being additionally associated with a client expiration time and the storage of the content being based upon such.

However, Bereznyi discloses content being additionally associated with a client expiration time and the storage of the content being based upon such (Fig. 6, labels 216 and 218 and column 11, lines 44-51).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Aubault and Deo with Bereznyi in order to give Aubault and Deo's combined system more flexibility in how it manages the terminal's memory.

Further, because Aubault and Deo teaches methods of memory management, it would have been obvious to one of ordinary skill in the art to try Bereznyi's expiration times as a method to manage memory, as a person of with ordinary skill has good reason to pursue known options within his or her technical grasp.

21. As to claims 1, 19, 29, and 39, they are rejected by the same rationale set forth in claim 12's rejection.

22. As to claims 2, 13, 20 and 30, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 1, 12, 19, and 29, and further disclose the processor is configured to receive one or more instructions to delete at least one piece of content based upon the deletion priority value of each piece of content stored in memory (Aubault, [0076]-[0078], relevance criterion reads on "a deletion priority value", in that the object with the lowest relevance criterion will be the first to be deleted), the processor being configured to receive the one or more instructions if, based on a determination if memory has sufficient storage capacity for at least one subsequent piece of content, the memory does not have (Aubault, [0075]), and the memory does not have sufficient storage capacity (Aubault, [0076]),.

23. As to claim 3, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 2, and further disclose determining at least one piece of content having an exceeded client expiration time (Bereznyi, Fig. 6, label 218 and column 11, lines 44-51), identifying a piece of content having a highest deletion priority value (Aubault, [0076]) from the at least one piece of content having an exceeded client expiration time, and send one or more instructions instructing the terminal to delete the identified piece of content (Bereznyi, Fig. 6, label 222 and Aubault, [0077]).

24. As to claims 4, 23, and 33, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 3, 22, 32, and further disclose the process is configured to repeatedly identify a piece of content, and send one or more instructions to instruct the terminal to delete the identified piece of content (Bereznyi, Fig. 6, labels 216, 218, and 222 and this is done repeatedly by the fact that the after label 222, the flow chart progresses to Fig. 7, which in turn returns to right before label 204 of Fig. 6), until one of memory of the terminal has sufficient storage capacity for the at least one subsequent piece of content (Bereznyi, column 11, lines 33-37), or each piece of content having an exceeded client expiration time has been identified and deleted (Bereznyi, column 11, lines 44-51).

25. As to claims 5 and 16, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 4 and 15, and further disclose when memory of the terminal does not have sufficient storage capacity for at least one subsequent piece of content and each piece of content having an exceeded client expiration time has been identified and deleted (see claim 4 rejection), the processor is further configured to identify at least one piece of content having a highest deletion priority value from at least one piece of content remaining in memory of the terminal, and send one or more instructions instructing the terminal to delete the identified at least one piece of content (Aubault, [0074]-[0077]).

26. As to claim 6, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 1, and further disclose the apparatus configured to store at least one piece of content, wherein the parameters further include a server expiration time (Bereznyi, column 11, lines 44-51 and Fig. 6, label 218), and wherein the processor is configured to send at least one piece of content to the terminal (Bereznyi, column 3, lines 56-66).

27. As to claim 7, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 6, and further disclose the processor is further configured to monitor the server expiration time of the at least one piece of content in memory of the apparatus to determine if at least one piece of content has an exceeded server expiration time (Bereznyi, Fig. 6, label 218), and if at least one piece of content has an exceeded server expiration time, delete the at least one piece of content having an expired server expiration time (Bereznyi, Fig. 6, label 222).

28. As to claims 9, 17, 26, and 36, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 1, 12, 19, 29, and further disclose the controller is configured to associate each piece of content stored in the memory is associated with respective parameter (Aubault, [0076] and Bereznyi, column 11, lines 44-51).

29. As to claims 18, 27, and 37, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 9, 17, 26, and 36, and further disclose the controller is configured set a deletion priority value for at least one piece of content (Aubault, [0079]).

30. As to claim 11, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 9, and further disclose the processor is configured to associate each piece of content stored in memory of the terminal with respective parameters (Aubault, [0046] and Bereznyi, column 11, lines 44-51).

31. As to claims 14, 21, and 31, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 13, 20, and 30, and further disclose the processor is configured to send a status of the at least one piece of content (Aubault, [0054]), such that at least one piece of content can be determined to have an exceeded client expiration time (Bereznyi, Fig. 6, labels 216 and 218 and column 11, lines 44-51), and wherein the processor configured to receive one or more instructions to delete a piece of content having a highest deletion priority value from the at least one piece of content having an exceeded client expiration time (Aubault, [0077]) and Bereznyi, Fig. 6, label 222).

Given the explicit teachings of Aubault (the use of a deletion priority value in order to control the contents of a cache) and Bereznyi (the use of expiration times in order to control the contents of a cache) one of ordinary skill in the art would view it as obvious to try using the two methods in concert, i.e. from a subset of objects have an exceeded expiration time, deleting first those that have a high deletion priority value, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. Using multiple parameters to determine whether or not to delete items in a cache is within the technical grasp of one of ordinary skill in the art.

32. As to claims 15, 22, and 32, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claims 14, 21, and 31, and further disclose the processor is configured to repeatedly receive one or more instructions to delete a piece of content having a highest deletion priority value (Aubault, [0074]-[0077]) from the at least one piece of content having an exceeded client expiration time until one of memory of the terminal has sufficient storage capacity for the at least one subsequent piece of content, or each piece of content having an exceeded client expiration time has been identified and deleted (Bereznyi, Fig. 6, labels 216, 218, and 222 and this is done repeatedly by the fact that the after label 222, the flow chart progresses to Fig. 7, which in turn returns to right before label 204 of Fig. 6).

33. As to claims 24 and 34, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 19 and 30, and further disclose receiving at least one piece of content at the network entity (Aubault, [0032]); and sending at least one piece of content to the terminal such that the terminal receives, and thereafter stores, the at least one piece of content (Aubault, [0032]).

34. As to claims 25 and 35, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 24 and 34, and further disclose the parameters further includes include a server expiration time (Bereznyi, column 11, lines 44-51), and wherein the method further comprises:

monitoring the server expiration time of the at least one piece of content in memory of the network entity to determine if at least one piece of content has an exceeded server expiration time (Bereznyi, Fig. 6, label 218); and

if at least one piece of content has an exceeded server expiration time, deleting the at least one piece of content having an expired server expiration time (Bereznyi, Fig. 6, label 222).

Given the explicit teachings of Aubault (a client cache, on the client side, and a server's object list, on the server side, with the same content) and Bereznyi (the use of expiration times in order to control the contents of a cache) one of ordinary skill in the art would view it as obvious to try using both a client

expiration time and a server expiration time as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. That is, a system with multiple entities may need an expiration time for each entity.


35. As to claims 28 and 38, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 26 and 37, and further disclose associating each piece of content comprises associating each piece of content stored in memory of the terminal with respective parameters at the network entity (Aubault, [0033], the server (network entity) stores the list of objects (content) and their associated statuses [0040] of the cache (memory) of the client (terminal) with Deo, column 3, lines 8-25, disclosing remote management of memory in a terminal).

Conclusion

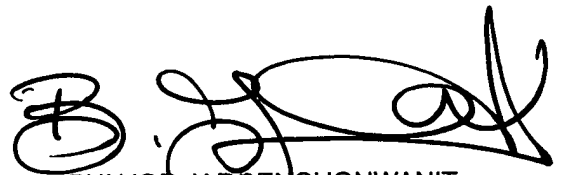
36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TJD



BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER
12/10/7